

## **Recent Past and Current Projects/Partnerships between India and Iowa State University**

### **1. Project #1: The Next Generation: Developing India's Institutional Capacity to Confront Agriculture's 21<sup>st</sup> Century Challenges** (ALO funding of \$299,000 from 2004-2006)

**Collaborating Institutions:** Iowa State University (Ramesh Kanwar) and University of Agricultural Sciences, Bangalore (UAS) (Dr. P. Chengappa and Dr. N. Nagaraj)

**Project Goals:** Overall objectives of this partnership are to conduct action oriented research on key challenges facing farmers in Karnataka state and then to identify alternative production and marketing models suitable to the Indian situation. Based on survey data collected in the two selected villages, the challenges are related to: i) Agricultural trade and policies, ii) Water management, iii) Sustainable Agricultural Systems, and iv) Health and Nutrition. A total of 24 biogas digesters have been installed and another 16 will be installed by the year's end in Venkatehalli village. The use of biogas enables farmers to have a cheaper fuel source for cooking and eliminates the need for firewood or natural gas. In addition, two demonstration sites have been established to illustrate the use and effectiveness of drip irrigation system for the growth of flowers (a high-value crop) and mulberry (for use in sericulture). Also, five new cropping systems have been introduced in villages to demonstrate the benefits of new crops, composting of manure, and vermiculture. The UAS offers regular seminars for farmers on new farming techniques.

### **2. Project #2: Formulation and Implementation of Work Plans between ICAR and the Iowa State University (ISU) for the biennium 1998-2000 and 2001-2003.**

**Collaborating Institutions:** Iowa State University (Ramesh Kanwar) and Indian Council of Agricultural Research (Dr. G.L. Kaul from 1998-2000, Dr. J.S. Samra from 2001-2003)

**Project Goals:** To develop collaborative research, education, and training programs between ICAR Institutes and Iowa State University Centers of Excellence under the World Bank funded NATP Project. Also, linkages for mutually beneficial scientific exchange programs were explored and developed. Potential areas of collaboration included biotechnology (plant and animal genomics), water management, sustainability and environment, value addition/crop utilization research, and fisheries. About a total of 35 ICAR Scientists visited ISU for 7 days to 3 month period and 20 ISU faculty visited ICAR Research Centers from 1997-2003. ISU Ag Engineering and Animal Science faculty provided consultancy for the ICAR NATP project. ISU Provost and Dean COA offered a *one day workshop for Deans and Vice Chancellors of SAUs on strategic planning*. In addition, Dr. Kanwar gave *one day workshops on "how to develop successful competitive grant proposals"* for ICAR scientists in Delhi, GB Pant University in Pantnagar, Agricultural University in Faisabad, and for the World Bank Sodic Project in Lucknow.

### **3. Project #3: Establish Study Abroad Programs for ISU Students in Mysore/Bangalore**

**Collaborating Institutes:** Iowa State University (Shelley Taylor) and Dhvanyaloka Centre for Indian Studies Mysore (Dr.M.S. Nagaraja Rao), 2002-2005

**Project Goals:** To offer Iowa State University students study abroad opportunities and internship experiences in organic and sustainable agriculture, analysis of regional water resources, shadowing of not for profit self help organization working with women's micro-credit enterprises organized in slums, language study (Kannada), and survey of public elementary school system. Iowa State University has offered two study abroad programs (11 students in 2001 and 22 in 2004).

### **4. Project #4: Fish production and fish genomics of India's coastal areas**

**Collaborating Institutes:** Iowa State University (Gavin Naylor) and Central Marine Fisheries Research Institute, Cochin (M. Devaraj, Director, C.M.F.R.I) (US-NSF funding of \$250,000), 1998-2000.

**Project Goals:** i) to collect genetic information to characterize India's marine fauna and assess genetic distinctiveness of Indian species compared to those in other parts of the world, ii) to characterize the population structures and migration patterns that are restricted to Indian waters. Establish monitoring stations equipped with DNA sequencing facilities at various locations around the Indian coastline. Tissue samples for DNA were extracted and amplified using PCR for a particular marker gene.